

Flight

First Aero Weekly in the World.

A Journal devoted to the Interests, Practice, and Progress of Aerial Locomotion and Transport.

OFFICIAL ORGAN OF THE AERO CLUB OF THE UNITED KINGDOM.

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“TO THE MAKING OF MANY MACHINES—”

THE issuing of the Aero Club's Year-Book brings to light the interesting fact that a greater number of members own aeroplanes than the total of those who possess balloons, the figures being 39 against 34 respectively. This, in itself, is interesting, but the reflection to which it gives rise is one of far wider scope than is comprehended within the work which can possibly be carried out by any individual association. It recalls to mind the large number of machines which have been entered for the Rheims Flight Meeting, which, if successful, will go down to posterity as the first competitive arena in the world's history of aviation; it turns the thoughts towards the really large number of flyers which have been built or are still in the making.

How many machines there are which have not yet seen the light of day as full-fledged flyers it is impossible to say, but happily in this country there are not a few which we hope will take the air anon, and abroad there are, of course, even more which will presently come forth to lift man into the skies. It is an encouraging reflection, is this idea which has led enthusiastic pioneers to the making of many machines, and out of it comes the thought of what they will all be like, and what manner of men will use them.

To be topical we can wish no would-be pilot greater success than has attended the efforts of M. Roger Sommer. Here was a man, a cloth manufacturer of the French Ardennes, who chanced only a few days more than a month ago to see a Farman biplane for sale at Chalons. Into the back of his mind came the idea to fly, and buying the machine, he successfully disproved an unwelcome theory, that it takes long and entails awful risks, to learn the art of flight. Doubtless his old cycling and motoring experiences stood him in good stead, but surely everyone who is likely to find himself in the pilot's seat of an aeroplane must possess the instinct that will have led him to acquire some sporting experiences at least in other fields. On the very day when Sommer bought his machine he flew about four miles. That was only on July 4th last, and now on Saturday, August 7th, he rose to become what the French call “recordman du monde,” for although not officially timed he then flew for 2h. 27m. 15s., which was a duration exceeding Mr. Wilbur Wright's performance

at the end of last year, when the American remained aloft for 2h. 20m. 22s.

So much for the modern method, as we said before, we hope many will up and do likewise. Nothing could be a greater encouragement to the sport and the industry than such achievements. On the other hand, we should regret exceedingly to see any undue foolhardiness in this individual conquest of the upper element. The pilot of the flyer takes chances just as every living thing takes chances, and they are greater the less his experience. Confidence is the signpost to success, we admit, but confidence without some judgment is a sure way to disaster. It is different for a man who has seen what can be done and emulates the performance of his master as compared with one who is urged on alone by his own faith in the future. Whoever may come and whoever may go, all honour must ever be given to that historical work which the Wright brothers carried on in the seclusion of their American home. They only believed in what was possible, and by their faith they made it reality. No man must ever forget that they led the way. If they did not up and fly the first day, it was because they realised their duty too well to court the hindrance of failure, and if they still make haste slowly, it is no longer others' concern. While much had been done in France before Wilbur Wright got there, it must have struck everyone what an electrical effect his presence had on the achievement of rivals in the field. Almost without exception did they at once proceed to achieve flights which were much superior to anything they had previously attained. And so the influence has spread, until we have as an intermediate climax, the remarkable case of M. Roger Sommer. From the men we may pass to the machines, and there we also hope to see an encouraging rivalry of types which shall produce knowledge of the greatest value appertaining to the science. Already we have monoplanes, biplanes and triplanes. Helicopters are not yet, if there are some believers. Orthopters or flapping-wing machines are in the dark. But, as we have said so often, conscientious work along any line must at least contribute something to the common stock, even though it fails to give individual success. In the aeroplane class of flying machine alone, there is immense scope for development, and there is no more satisfactory feature about the immediate history of the flight movement than that which alternatively brings the monoplane and the biplane to a position of pre-

eminence. Wilbur Wright and his double-decker win the Michelin Cup, Bleriot and his pair of wings cross the English Channel, Sommer and his tailed biplane beat the duration record. First a biplane, then a monoplane, then a biplane again, but even the two biplanes differ among themselves, for the Wright flyer is tailless, and it is, so to speak, one of the great points in aeroplane construction as to whether a flyer shall have a tail or no tail.

Then there is the question of weight. Curtiss, in America, has produced a very light machine; in fact, on this score he has forged ahead of others. There is much misconception about weight in connection with flyers, for there are two distinct sides to the question which we have found that people are a little apt to confuse. There seems to be an idea that this striving to save a pound or two here and there, which is apparently the aim and object of constructors, in itself constitutes a matter of great importance, as if flight were a question of having a machine just so heavy, neither more nor less. This is not the proper way to regard the problem. The possibility of flight is not governed by limitations of this kind, any more than are the majority of the world's big problems. Already a stage has been reached in the development of modern flyers, where reliability is becoming the chief demand, and nothing could well be more satisfactory as an earnest

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MR. CODY FLIES AGAIN.

ON Wednesday evening Mr. S. F. Cody succeeded in making three very good flights over Laffan's Plain. Since its last appearance the flyer has undergone a good deal of rearrangement and the motor now fitted is an 80-h.p. E.N.V. The first flight was about one and a half miles, during which Laffan's Plain was encircled and the aviator returned to his starting point. Two further flights of similar length were made, but in the last the machine just touched the earth in turning. The flight aroused a good deal of interest in the Territorial Camp, over which Mr. Cody passed in the course of his trips.

One of the principal alterations in the aeroplane is the shifting of the aviator's seat to the front of the motor. This has improved the balance of the machine and Mr. Cody now thinks he could carry two passengers easily.

of the reality of the whole movement. There is a side of the problem, however, in which weight does play a tremendously important part, and that is when the question of the total weight of the machine and equipment is under consideration. There is the problem, for instance, of the small flying machine, which can be solved either on a basis of speed, as has been done by Bleriot with his short-span monoplane, or on a basis of total weight which is being attempted by Curtiss. In order to support a flying machine in the air it is necessary with equal efficiency either to have surface or speed, and when, for some arbitrary reason, it is desired to keep the speed as low as possible, the necessity of reducing the weight obviously remains as the only means of similarly reducing the surface. What is the advantage of a small light machine? it may be asked. It all depends on those who use it. The point we wish to emphasise is this, that it has proved easier at the present time to design the larger machine, and that the small light machine still awaits development. Before it can be developed, it is necessary to have a light and not necessarily very powerful engine for the purpose. But when it has been developed we can well imagine it should prove a very attractive type of flyer for the education of those men who will be ever coming forward, and by their enthusiasm contributing to the making of many machines.

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BRITISH ARMY AIRSHIP ON TRIAL.

ON the 5th inst. Col. Capper conducted an extended series of trials with the miniature experimental dirigible built at the Army Balloon Factory at Aldershot. Since its last public appearance the topmost fin has been discarded, the propellers have now been placed in a lower position on each side of the car, and a new steering plane fitted in front. On the engine being started the airship went off at a fair rate, but as soon as a speed of about nine miles an hour was reached the pressure of air forced the nose of the gas-bag back, and various other drawbacks made themselves apparent. These are all being corrected before any further trials are made. The experiments were watched intently by the London Territorial Balloon Company, and a detachment of that corps were requisitioned to handle the dirigible.



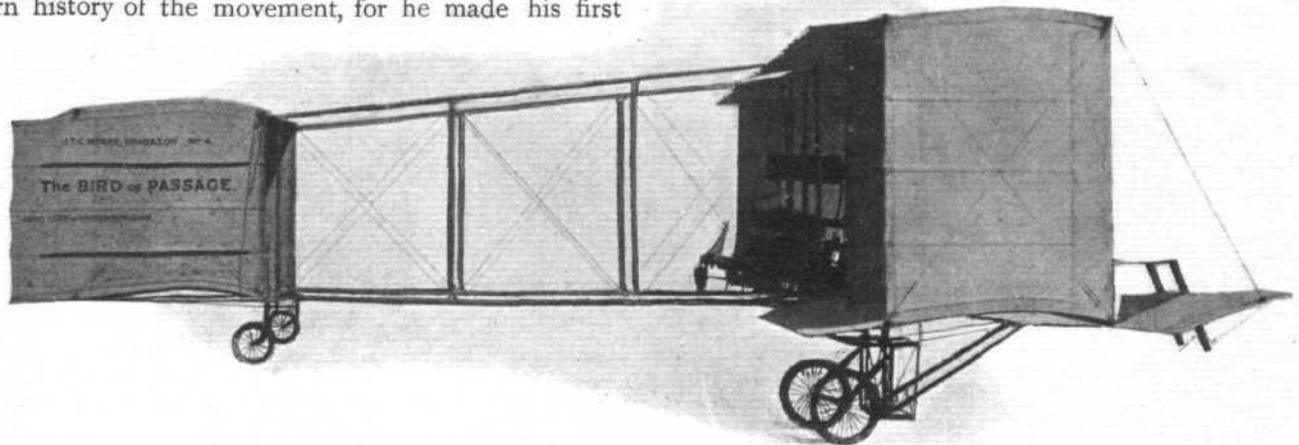
Mr. S. F. Cody, on Wednesday of this week, on his re-modelled biplane, made some splendid flights at Aldershot. Quite a sensation was created amongst the Territorials encamped on Laffan's Plain as Mr. Cody circled gracefully above them. Above is a photograph of Mr. Cody during one of these flights. His motor is an 80-h.p. E.N.V., the total machine weighing nearly a ton.

THE VOISIN BIPLANE, 1908-9 TYPE.

A DETAILED DESCRIPTION OF MR. MOORE-BRABAZON'S "BIRD OF PASSAGE," TOGETHER WITH SCALE DRAWINGS WHICH HAVE BEEN OBTAINED THROUGH THE COURTESY OF THE OWNER FROM THE ORIGINAL MACHINE.

WHILE Farman and Delagrange were arousing the enthusiasm of France, and attracting the keen interest of all nations to their brave and diligent attempts to conquer the air, the designer and constructor of the first practical type of French flyer remained in comparative obscurity; for the moment everyone overlooked the man behind the machine. M. Voisin commenced his experiences in flight at a sufficiently early period in the modern history of the movement, for he made his first

One of the first of those to secure a Voisin flyer was Mr. Moore-Brabazon, and it is of this machine, now housed at Shellbeach, that the owner has very kindly permitted us to make the accompanying scale drawings for the benefit of readers of *FLIGHT*. Mr. Moore-Brabazon's "Bird of Passage," as he has named his



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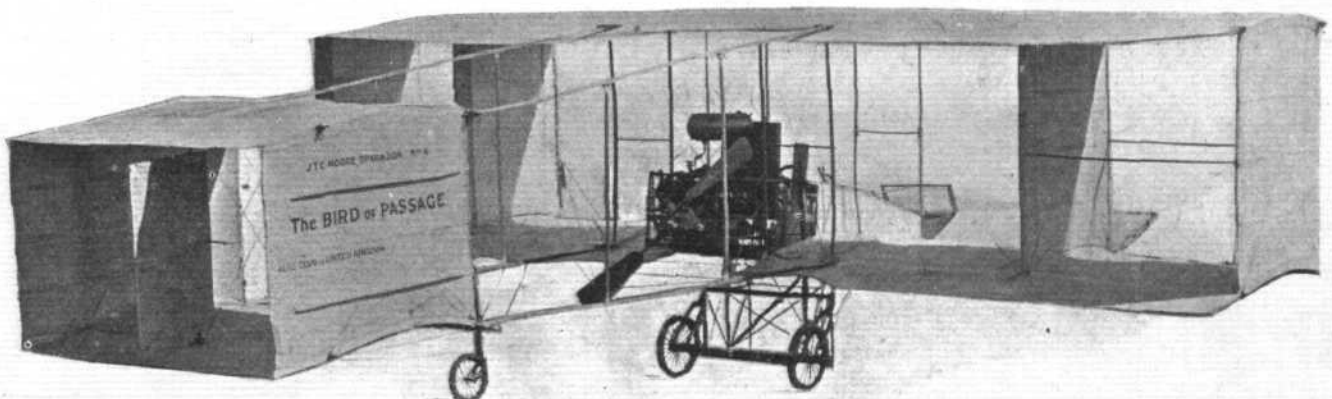
Side view of the Voisin biplane, showing the relative position of the engine and the construction of the outrigger which carries the tail.

public effort as pilot of the glider with which M. Bleriot inaugurated aerial experiments over the Seine. Bleriot's glider was towed by a fast motor boat, and more than once M. Voisin found himself prematurely plunged thereby beneath the surface of the water. When Voisin and his brother settled themselves down to the designing of a motor-driven machine, they made no particular outcry about the occasion. It was not until after the successful flights which Farman and Delagrange had

flyer, is a machine with which he has achieved several flights. In fact, his early progress in the mastery of the air with it was remarkable. Since its arrival in this country he has also flown, but not to the same extent, partially owing to the inclemency of the present summer.

Leading Characteristics.

The Voisin flyer is an original type of machine, and it is therefore the more important to specifically state its



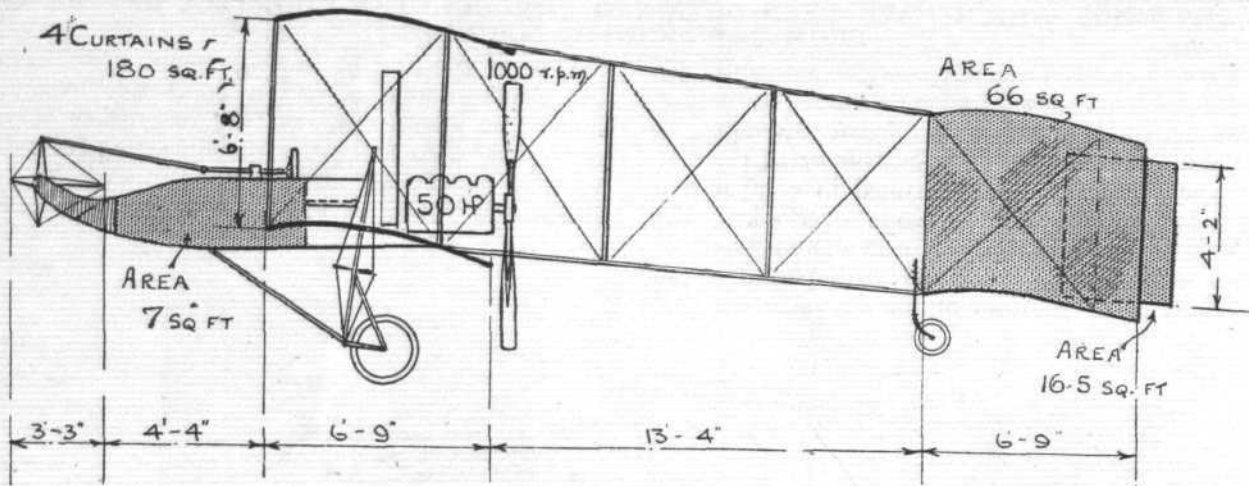
"Flight" Copyright Photo.

View of the Voisin biplane from behind, showing the relative size of the rudder and tail.

made with their device had been adequately applauded, that France herself began to realise who it was that produced them. For his work, however, M. Voisin has received the very just award of having his name included on the first list of decorations to be awarded in connection with the science and art of flight.

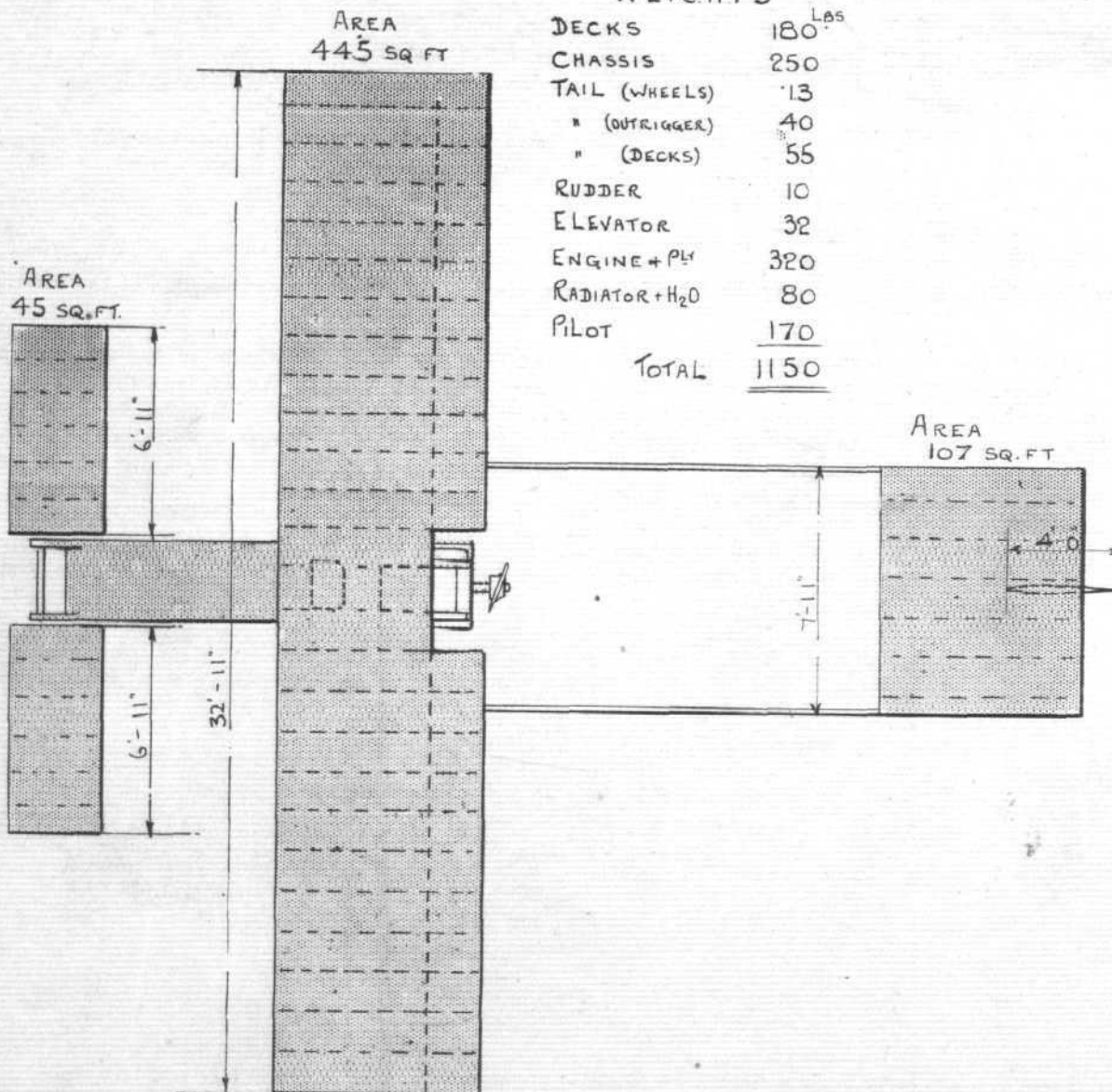
leading characteristics. Broadly speaking, the great point in the Voisin flyer is the fact that it has a tail, this member consisting of a kind of open-ended box carried at the rear upon a light outrigger framework extending some thirteen feet behind the main decks.

Having two principal supporting surfaces, the Voisin

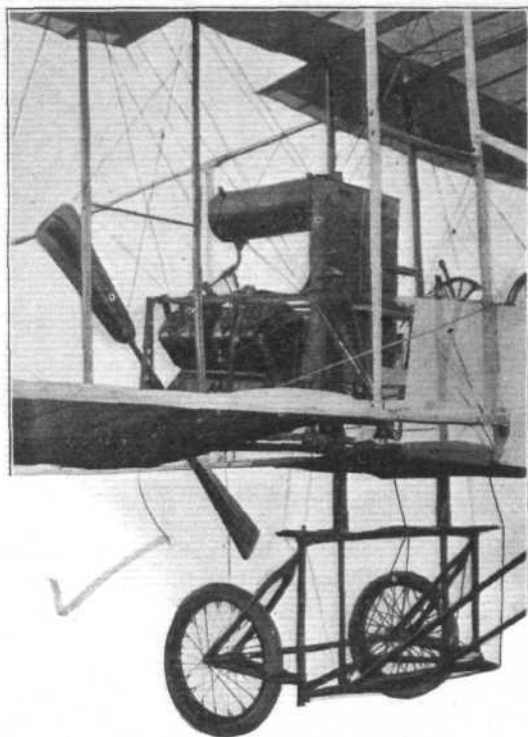


WEIGHTS

DECKS	180 ^{lbs}
CHASSIS	250
TAIL (WHEELS)	13
" (OUTRIGGER)	40
" (DECKS)	55
RUDDER	10
ELEVATOR	32
ENGINE + PLY	320
RADIATOR + H ₂ O	80
PILOT	170
TOTAL	<u>1150</u>



flyer belongs to the biplane class, and in this respect is similar to the Wright machine, with which it has another point in common, in the presence of an elevator. The elevator consists of a pivoted plane mounted about six feet in front of the main decks. Apart from the presence of the tail, the greatest contrast between the Voisin and



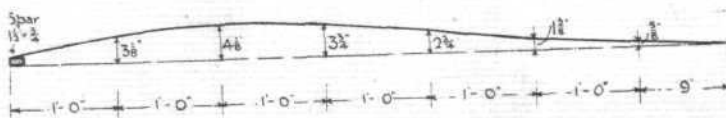
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General view of the central part of the Voisin biplane, showing its suspension on the chassis.

Wright types lies in the absence of any wing warping or other special method of maintaining lateral stability in the Voisin flyer, beyond what is available from the effects of steering by the rudder.

Unlike the Wright flyer, which is supported upon runners or "ski," the Voisin machine, when on the ground, rests upon a wheeled chassis, and it is a leading characteristic in the construction of the machine that this chassis is attached to a kind of girder which supports the engine, contains the driver's seat, and carries an extension on which the elevator is mounted. This chassis-frame is one of the elements into which the machine can be dismantled for transport.

The last, but by no means the least important, characteristic of the Voisin flyer is its use of a single high-speed propeller mounted direct on the crank-shaft of a 50-h.p. engine.



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Diagram showing the camber of the decks on the Voisin biplane.

The Main Decks.

The main decks have a total span from tip to tip of approximately 33 ft., and a fore and aft chord of 6 ft. 9 ins. They are single-surfaced with fabric which is stretched over a foundation consisting of ash ribs lying across two transverse main spars. Two spars are placed about 5 ft.

apart, and the ribs, which end up flush with the front spar, overlap the rear member a matter of 21 ins., whereby the trailing edge of the decks becomes flexible to a limited extent. This flexible trailing edge is a feature of Voisin construction, as also is the single-surfacing of the decks.

The "Continental" surface fabric is so attached that it lies beneath the ribs, but these members are enclosed in pockets of the same material; it is this feature of the construction which gives the uneven appearance to the upper surface of the deck. In order to avoid sharp angles, the main transverse spars are also covered by strips of fabric so fastened that they give the spars a virtual triangular section.



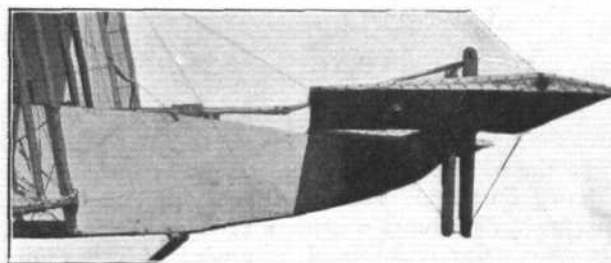
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Detailed view of the tail on the Voisin biplane, showing method of mounting the rudder, and also the small wheels which support it on the ground.

All the ribs which lie between the two main spars are not alike, for at intervals coinciding with the vertical struts which separate the decks the ribs are considerably larger, and are built up to form an inverted T section. Before being mounted, the ribs are permanently set to the required shape, so that the decks when surfaced shall have the proper camber.

The Tail.

The tail, which is also of biplane form, is constructed



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Detailed view of the elevator on the Voisin biplane, showing how it is mounted and stayed.

on exactly similar lines to the main decks, and although it has a smaller gap, and a much shorter span, the chord is the same dimension. The area of the two decks of the tail is nearly one-quarter of the area of the main decks, and it is necessary to bear its value in mind when considering the effective supporting area of the whole



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Mr. J. T. C. Moore-Brabazon's "Bird of Passage" outside Short Brothers' factory at Shellbeach. The elevator in this view is shown tilted.

machine. The aspect ratio of the tail is only a little more than unity.

The Elevator.

Unlike the tail, the elevator does not resemble the main decks, either in its form or construction, for in the first place it is of the monoplane type, secondly it is double-surfaced. The elevator is, owing to its method of mounting, divided into two equal portions on either side of the girder frame, which juts out in front of the main deck. The area of both parts combined is 45 sq. ft. or a little more than one-tenth of the area of the main decks. Its effective span is 13 ft. 10 ins., and as its chord is 3 ft. 3 ins. the aspect ratio of each portion is about 2.

The ribs which stiffen the elevator are sufficiently thick at the maximum section to allow the hinge-rod to pass through them, and fore and aft of this point, which lies $10\frac{1}{2}$ ins. behind the leading edge, the ribs taper to a point. The hinge-member consists of a $1\frac{1}{4}$ -in. steel tube, and the maximum depth of the elevator at this point is about $2\frac{1}{2}$ ins. Being double-surfaced, that is to say, having a fabric covering top and bottom, the ribs

and the hinge are entirely enclosed. The elevator is virtually cambered by its arched upper surface; the bottom surface is approximately flat.

The operation of the elevator is carried out by means of a connecting-rod attached to the steering-wheel spindle. This latter member is mounted so that it can slide in its bearings, and the pilot is thus able to set the elevator by pushing and pulling the steering-wheel bodily to and fro.

The Rudder.

The rudder resembles the elevator in form and construction. It is situated between the decks and the tail, being mounted upon a vertical hinge pivoted upon the rear transverse spars of the tail decks. Owing to the tail itself having a flexible trailing edge most of the rudder lies wholly within the tail, only about 1 ft. 3 ins. of its chord projecting in the normal position. The hinge of the rudder is about 18 ft. 4. ins. behind the rear edges of the main decks.

The operation of the rudder is effected by wires, which pass round a wooden drum on the steering spindle.

(To be concluded.)

Farman Wins the "Professor Prize."

THE prize of 1,000 francs offered through the Ligue Nationale by M. A. C. Saint-Macary for the professor who produced the most promising pupil has been won by Henry Farman. The conditions stipulated that the pupil must fly round a course of one kilometre three times on one day, and this M. Sommer had little difficulty in doing, and so winning the prize for his tutor.

Wright Bros.' next Visit to Europe.

FROM Odessa it is announced that a contract has been made by the Aero Club there with Wilbur Wright, under which the latter will make some flights during October next in Odessa.

On Tuesday Orville Wright, accompanied by his sister, left New York for Europe on the "Kronprinzessin Cecilie." He will first visit England, going to Messrs. Short's factory at Shellbeach in order to test the Wright

machines which have been built by them. Afterwards he will go to Berlin to carry out the flights which were arranged to be made on Aug. 20th. We also refer to this on page 493.

Laffan's Plain "Closed" to Experimenters.

A CORRESPONDENT writes complaining that permission has been refused him to use Laffan's Plain for experimenting with his motor-driven aeroplane, and he also mentions that other suitable places, like Wormwood Scrubbs, Hackney Marshes, and Wimbledon Common, are closed to flyers, even though none of those places are much frequented during the greater number of hours of daytime. It appears that in response to his application he has been recommended to Salisbury Plain. He very naturally feels aggrieved that any difficulties should be put in the way of British experimenters, particularly now that so much leeway has to be made up in this country.

THE ARMY AND AERONAUTICS.

THE Advisory Committee for Aeronautics, of which Lord Rayleigh is President, have presented an interim report as follows, outlining the programme of research work which they suggest shall be undertaken at the National Physical Laboratory:—

"The Committee have held four meetings, two at the War Office, one at the Balloon Factory, Aldershot, when the work in progress there was inspected, and the fourth at the National Physical Laboratory.

"In accordance with the arrangements made at the time of its appointment, the work of constructing and experimenting with either aeroplanes or dirigibles remains with the Government Departments with which the Committee is connected. It is the duty of the Committee to advise on questions submitted by those departments, to deliberate on and determine the scientific matters arising out of these questions, to arrange, when necessary, for experimental work at the National Physical Laboratory, and to advance the applications of the science of aeronautics by such means as may seem best. With these objects in view, the work of the Committee has, for the present, been in the main preliminary in its character.

"**Reports as to Existing Knowledge.**—In the first place it appeared desirable to obtain reports as to the present state of knowledge on the questions to be considered, while the information afforded by the reports has also formed the basis of experimental work now being undertaken at the National Physical Laboratory. It is proposed later to publish in an accessible form such of these reports as contain matter of more general interest.

"The reports already arranged for include the following:—

Memorandum by Mr. A. Mallock on general questions to be studied.

Report by Dr. T. E. Stanton on recent researches on the forces on plane surfaces in a uniform current of air.

Memorandum by Sir G. Greenhill on stability.

Memorandum by Sir G. Greenhill on the screw propeller.

Report by Dr. W. N. Shaw on wind structure, dealing especially with the phenomena of gusts, and on the variation of wind velocity with height.

Preliminary report by Mr. F. W. Lanchester on petrol motors for aeronautical purposes.

Report by Dr. W. Rosenhain on light alloys.

Report by the Secretary on existing knowledge on the subject of the accumulation of electrostatic charges on balloons, and the precautions to be adopted to avoid the dangers arising therefrom.

"Additional reports are promised on other matters of importance. The Committee have also arranged for the preparation of abstracts of published papers and memoirs relating to aeronautics which are of special interest.

"**Preliminary Programme of Work.**—With a view to determining the work to be undertaken first at the National Physical Laboratory, the following list of experiments was compiled.—

I.—General Questions in Aerodynamics.

1. Determination of the vertical and horizontal components of the force on inclined planes in a horizontal current of air, especially for small angles of inclination to the current.
2. Determination on surface friction on plates exposed to a current of air.
3. Centre of pressure for inclined planes.
4. Distribution of pressure on inclined planes.
5. Pressure components, distribution of pressure and centre of pressure for curved surfaces of various forms.
6. Resistance to motion of bodies of different shapes; long and short cylinders, &c.
7. Combinations of planes; effect of pressure components of various arrangements of two or more planes.

II.—Questions Especially Relating to Aeroplanes.

8. Resistance components for aeroplane models.
9. Resistance of struts and connections.
10. Resistance of different stabilising planes, both horizontal and vertical.
11. Problems connected with stability:—
 - i. Mathematical investigation of stability.
 - ii. The stability of aero curves of different section and of different plan (Turnbull's experiments).
 - iii. Effect of stabilising planes, and investigation of questions as to their size and position.
 - iv. Effect of rudder action.
 - v. Effect of gusts of wind.
 - vi. Investigations as to stability of models for different dispositions of weight, &c.
12. Materials for aeroplane construction.
13. Consideration of different forms of aeroplane, monoplane, biplane, &c.
14. Other forms of heavier-than-air machines, helicopters, &c.

III.—Propeller Experiments.

15. Efficiency, and the effect on the efficiency of variations in blade area, pitch and slip.
16. Positions relative to the machine.

IV.—Motors.

17. Efficiency.
18. Reliability and steadiness.
19. Materials of construction.
20. Design.

V.—Questions Especially Relating to Airships.

21. Materials of construction, strength, &c.
 - i. Alloys, wood, bamboo, &c.
 - ii. Balloon fabrics.
 - iii. Wires, cords.
22. Production of hydrogen.
23. Gastightness of fabrics.
24. Detection of leakage.
25. Air resistance to ships of different form; experiments on models.
 - i. Effect of shape of ends.
 - ii. Effect of length.
 - iii. Variation with speed.
 - iv. Distribution of pressure as affecting stability, strength in construction, position of propellers, fins, &c.
 - v. Total resistance of models rigged to represent different balloons.
26. Questions as to stability of airships in different positions.
27. Stabilising and steering appliances, fins, rudders, &c.; form and position.
28. General design.
29. Navigation of airships. Mooring, &c.
30. Efficiency and position of propellers for airships.
31. Motors for airship work.

VI.—Meteorology.

32. General information relating to variations of wind velocity and phenomena connected with gusts of wind.
33. Relative variation in speed and direction of the wind at different heights above the earth's surface.
34. Vertical movements in the air.
35. Rotary movements in the air.
36. Electrical phenomena.
37. Formation of clouds, snow, hail, &c.

"In preparing this list the Committee received valuable assistance from Colonel Capper, the Superintendent of the Balloon Factory, who, at their request, visited the National Physical Laboratory to confer with the Director and Dr. Stanton, Superintendent of the Engineering Department.

"**Arrangements for Experimental Work.**—After considering this list the Committee came to the conclusion that it was desirable that the following should be undertaken at once:—

- a. Experiments on air resistance and on air friction as outlined in 1 to 7 above; and including experiments on models of airships and aeroplanes, resistance of wires and connecting stays, &c.

- b. Motor tests.
- c. Propeller experiments.
- d. Tests for gas-tightness of materials suitable for dirigibles.
- e. Experiments on the behaviour of different materials with reference to the accumulation of electrostatic charge, and generally as to means of protecting airships from the effect of electrical discharges.

"Accordingly the Executive Committee of the Laboratory have, at the request of the Committee, made the necessary arrangements for carrying out this part of the work, and the Lords of H.M. Treasury have undertaken to include in the estimates for the work of the Laboratory presented to Parliament provision for the funds necessary.

"The Committee trust that the following details of this part of their work may prove of interest:—

"Some addition to the existing buildings at the Laboratory has been found necessary to provide space for part of the experimental work, while a special building is also being provided for the whirling table referred to below. The equipment which is now being installed comprises the following:—

i. A wind channel 4 ft. square and about 20 ft. long, with a fan giving a draught of 40 ft. per second, special arrangements being made to obtain a uniform flow. This will be employed for the determination of the air pressure components on plane and curved surfaces, for the resistance of models of airships and aeroplanes, and for observations on the centre of pressure, frictional resistance, stability, &c.

ii. A whirling table of about 70 ft. diameter. For this a special building is being erected; the table itself is under construction in the Laboratory. It will be employed for a repetition of Dines' and Langley's experiments, as well as for propeller tests, which are urgently called for.

iii. Two winds towers for experiments in the open. These will enable some of the air-channel experiments to be repeated on a larger scale in the natural wind, and will, it is hoped, afford valuable information as to the varying conditions which obtain in practice.

iv. Apparatus for efficiency tests on high-speed motors up to 50-h.p.

"In addition, certain machine tools, &c., are being provided for workshop use.

"For other necessary work the existing equipment in the various departments of the Laboratory will be available. Thus, strength tests on materials of construction can be made as required; work on light alloys is in progress; experiments on gas-tightness of balloon fabrics and on means of detection of leakage are being arranged. The tank now under construction for experiments on ship models will be provided with a carriage able to attain a velocity of 25 ft. per second over a run of 500 ft.,

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Capt. Ferber Officially Permitted to Compete.

CAPT. FERBER, otherwise "de Rue," has now received official permission to compete for the Siot-Decauville prize for the first French army officer to fly round a circular kilometre. Capt. Ferber has announced his intention of trying on Monday to win the prize, which consists of a bronze figure, *La Lionne Blessée*, by Valton.

The National Airship.

MESSRS. GREEN'S MOTOR PATENTS SYNDICATE, Ltd., of Berners Street, have decided to tender for the engines to be supplied for the giant airship which Messrs. Lebaudy Frères are building for the British Army. This firm was about the first British firm to devote their attention exclusively to the construction of engines for aeronautical purposes, and they have already supplied one large engine of high power to the British War Office.

and will, it is hoped, also prove of value for air pressure and propeller experiments, while a lighter carriage could be designed for special experiments at higher speeds.

"Communications with the Aeronautical Society, the Aero Club, and the Aerial League.—With a view to rendering their work as helpful as possible to all those who are engaged in practical aeronautical work, the Committee put themselves in communication, during May, with the Aeronautical Society, the Aero Club, and the Aerial League, and invited suggestions as to the directions in which the assistance of the Committee would be of most value. These bodies have undertaken to give the matter careful consideration, and to lay their views before the Advisory Committee at an early date; and at their last meeting the Committee received a letter from the Aerial League giving an account of the interesting programme the League propose to carry out. To this the Committee have replied that they will be glad to co-operate with the League in all such branches of their work as fall within the scope of the Committee.

"Designs Submitted by Inventors.—The position of the Committee with regard to inventions and ideas which their authors desire to be treated as confidential has been raised by various requests received.

"On this point the Committee have decided that it is not within their province, as a body advising Government Departments, to receive confidential communications from inventors and others which they are not free to use unreservedly in the advice it may be their duty to give to the Government.

"Inventors wishing to bring their ideas before the Committee must previously take the steps necessary to protect their inventions, unless they are prepared to allow the Committee to use them freely in their work.

"Confidential communications forwarded to the Admiralty or the War Office will be dealt with by those Departments as they may judge desirable."

The Members of the Committee are:—

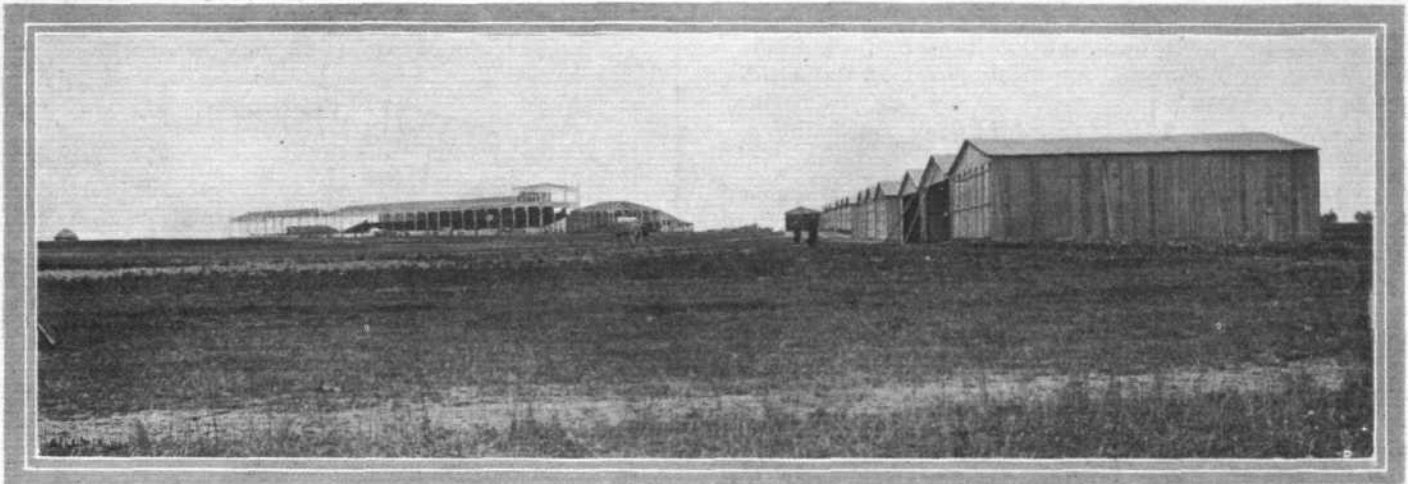
The Right Hon. Lord RAYLEIGH, O.M., F.R.S. (*President*); Dr. R. T. GLAZEBROOK, F.R.S. (*Chairman*); Rear-Admiral R. H. BACON, C.V.O., R.N.; Mr. Horace DARWIN, F.R.S.; Sir G. GREENHILL, F.R.S.; Major-General Sir C. F. HADDEN, K.C.B.; Mr. F. W. LANCHESTER; Mr. H. R. A. MALLOCK, F.R.S.; Professor J. E. PETAVEL, F.R.S.; Dr. W. N. SHAW, F.R.S.; *Secretary*, Mr. F. J. SELBY.

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M. Paulhan at Dunkirk.

LAST Saturday, a few hours after Sommer had made his record-breaking flight, M. Paulhan put up a splendid performance at Dunkirk, and could have gone on indefinitely but for his fuel supply giving out. Starting at 7.35 a.m., he flew for 1h. 32m. 45s., keeping his machine at an altitude of about 50 metres. On the previous morning he made a cross-country flight from Malo-les-Bains to Bray Dunes and back, a distance of 20 kiloms. for the double journey, the time for which was 18 mins. 20 secs. This he accomplished at a height of about 60 metres, but as it was not officially observed he proposes to repeat the journey as soon as the weather is favourable. At the earliest opportunity he intends also to make an attempt to better the world's duration record. After inspecting the neighbourhood of Cassel, M. Paulhan has declared that the conditions laid down for the prize of 2,500 francs for a flight from Malo to Cassel are "impossible," and that there is not an aviator who could comply with them.

RHEIMS AVIATION WEEK.



RHEIMS AVIATION WEEK.—General view of the grand stand and the row of sheds erected for the accommodation of competitors' flyers at the big international aviation meeting opening at Rheims on Sunday, August 22nd. (See sketch plan of general arrangements.)

TO-MORROW week, Sunday, the 22nd inst., the *Grand Semaine de Champagne* will commence, and in view of the long list of prominent aviators who have promised to take part in the various contests, this will go down to history as the first great meeting of aeroplanes. Its most prominent event will be the first contest for the Gordon-Bennett Aviation Trophy, and doubtless future generations will refer to it in much the same way as motorists do to the first Gordon-Bennett motor car race. The full programme for the week is as follows:—

Sunday, August 22nd.—French Selection Trials for the Aeroplane Gordon-Bennett, Circuit Prize (first day), Grand Prix of Champagne and the City of Rheims (first day), Dirigibles' Prize (first day).

Monday, August 23rd.—Circuit Prize (second day), Speed Trials (first day), Dirigibles' Prize (second day), Passengers' Prize.

Tuesday, August 24th.—Circuit Prize (third day), Dirigibles' Prize (third day).

Wednesday, August 25th.—Grand Prix of Champagne (second day), Dirigibles' Prize (fourth day), Circuit Prize (fourth day).

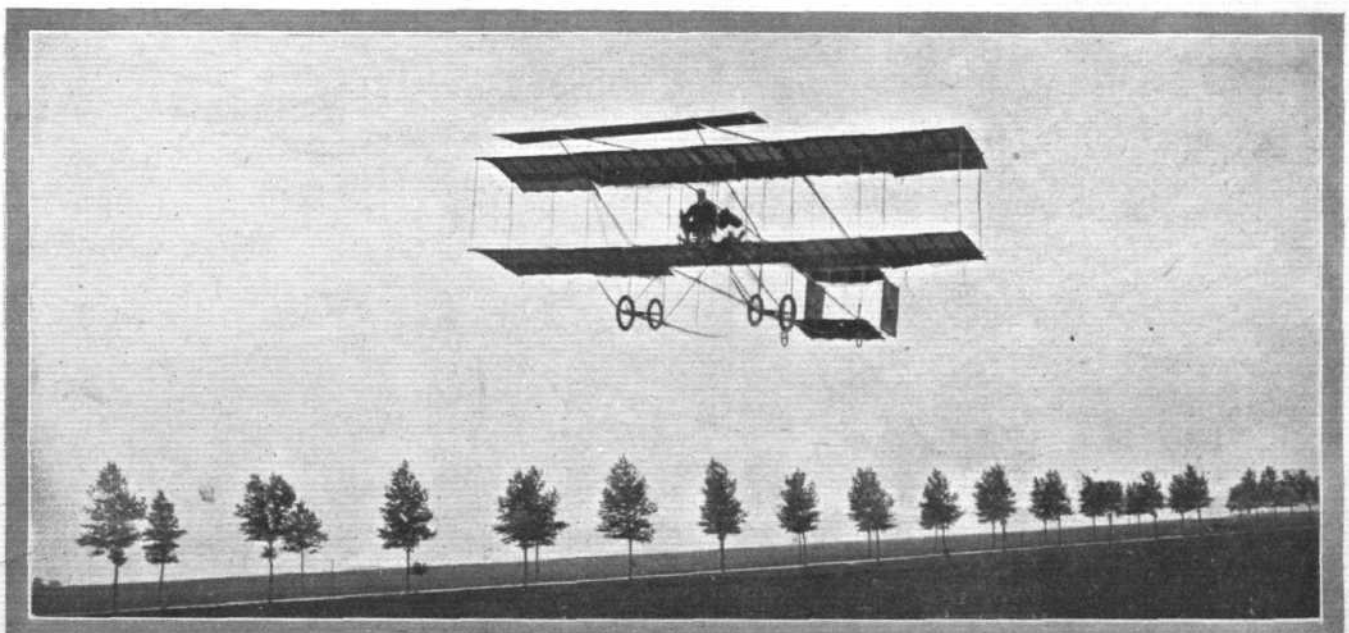
Thursday, August 26th.—Landing competition for ordinary Balloons, Dirigibles' Prize (fifth day), Circuit Prize (fifth day).

Friday, August 27th.—Grand Prix (third day), Circuit and Dirigibles' Prizes (sixth day).

Saturday, August 28th.—Gordon-Bennett Cup Contest, Dirigibles' and Circuit Prizes (seventh day).

Sunday, August 29th.—Speed Trials (second day), Dirigibles' and Circuit Prizes (eighth day), Height Prize.

In the Gordon-Bennett Race, the competitors have to cover two circuits of the 10 kilom. course and the one which covers it in the fastest time will secure the £500 trophy for his club and £1,000 for himself. A large number of prominent French aviators have entered for this event and eliminating trials to select the three French representatives will be held on the opening day. The other countries taking part will be Great Britain, represented by Mr. G. B. Cockburn on a Farman biplane, America, by Mr. Glenn Curtiss on a machine of his own design, Austria, by an aviator not yet named, and Italy, by Lieut. Calderara on a Wright flyer.



Mr. G. B. Cockburn is the British representative of the Aero Club of the U.K. at Rheims Aviation Meeting, and we wish him every success in upholding the British end of the art of flying. He has already, as our readers are aware, made some extended flights, and above he is seen practising on his Farman biplane.

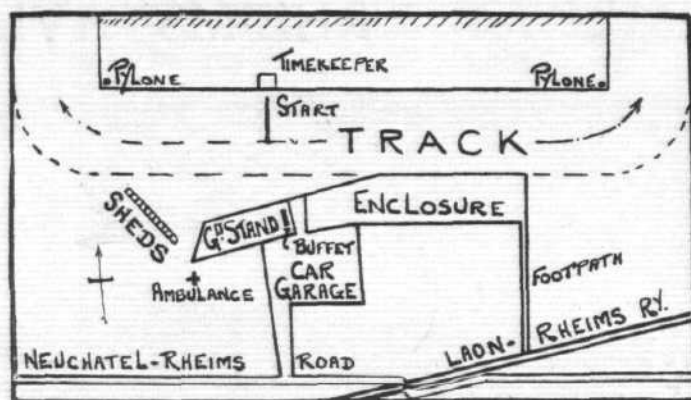
Next in importance is the *Grand Prix of Champagne and Rheims*, in which six prizes of 50,000, 25,000, 10,000, 5,000, 5,000, 5,000 francs will be given to the half-dozen aviators who make the longest flights in point of distance, and it will be seen from the above programme that attempts will be made for these prizes on the 22nd, 25th, and 27th inst.

The *Prix de la Vitesse* (Speed Prize), consisting of four prizes of 10,000, 5,000, 3,000 and 2,000 francs, will be given to the four aviators who make the best speeds over a 30-kilom. course, consisting of three circuits of the track.

The *Prix des Passagers* (Passengers Prize) of 10,000 frs. will be given to the aviator who carries the greatest number of passengers over one lap of the 10-kilom. course, and in the case of more than one competitor carrying the same number the fastest machine will be the winner. The *Prix de l'Altitude* (Height Prize), also of 10,000 frs., will be awarded to the pilot who attains the greatest altitude. Each machine taking part in this event must be fitted with a registering barometer graduated every ten metres, and the judges reserve the right to change the barometers from one machine to another. The minimum height required to qualify for the prize is 50 metres.

The only other prize for heavier-than-air machines is the *Prix du Tour de Piste* (Circuit Prize), and here 7,000 frs. and 3,000 frs. will be given to the aviators who, during any of the events between 9 and 11 a.m., and 1 and 6.30 p.m. on any day make the best time over one lap of the course.

The *Prix des Aeronats* is for dirigibles, and the prize



Sketch plan showing the arrangements at the starting end of the huge Rheims aerodrome. The track itself measures 10 kiloms. round, and is situated in the plains of Betheney, where the grand review in honour of the Czar was held in 1901.

of 10,000 frs. will be given to the dirigible which covers five circuits of the course in the best time.

In the landing competition for ordinary balloons not exceeding 900 cubic metres capacity, four prizes of 1,000, 500, 300, and 200 francs will be given to the four aeronauts who make the best performances.

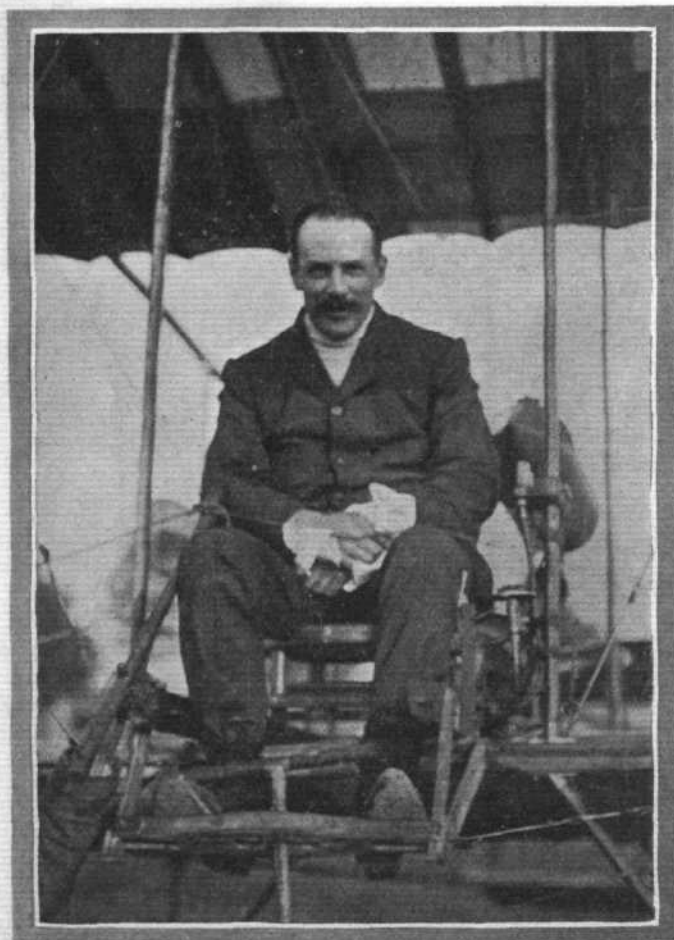
The Entries.

Altogether thirty-eight entries have been received for the various aeroplane events, as follows:—

Competitor.	No.	Machine.
J. Gobron	1	Voisin
F. de Rue	1	"
M. Paulhan	1	"
E. Banau Varilla	1	"
H. Rougier	1	"
A. Fournier	1	"
M. Legagneux	1	"
P. Tissandier	2	Wright
Comte Lambert	2	"
Société Ariel	2	"
L. Bleriot	3	Bleriot
L. Delagrangé	1	"
A. Leblanc	1	"
H. Farman	2	Farman
G. B. Cockburn	1	"
R. Sommer	1	"
R. Esnault-Pelterie	3	R.E.P.
M. Guffroy	1	"
H. Latham	1	Antoinette
R. Demanest	1	"
Ruchonnet	1	"
Glenn H. Curtiss	2	Curtiss
Santos Dumont	1	"Demoiselle"
L. Breguet	1	Breguet
Sanchis-Besa	1	Sanchis
Kluytmans	1	—
G. Bailly	1	—
L. Schreck	1	—
Fernandez	1	—

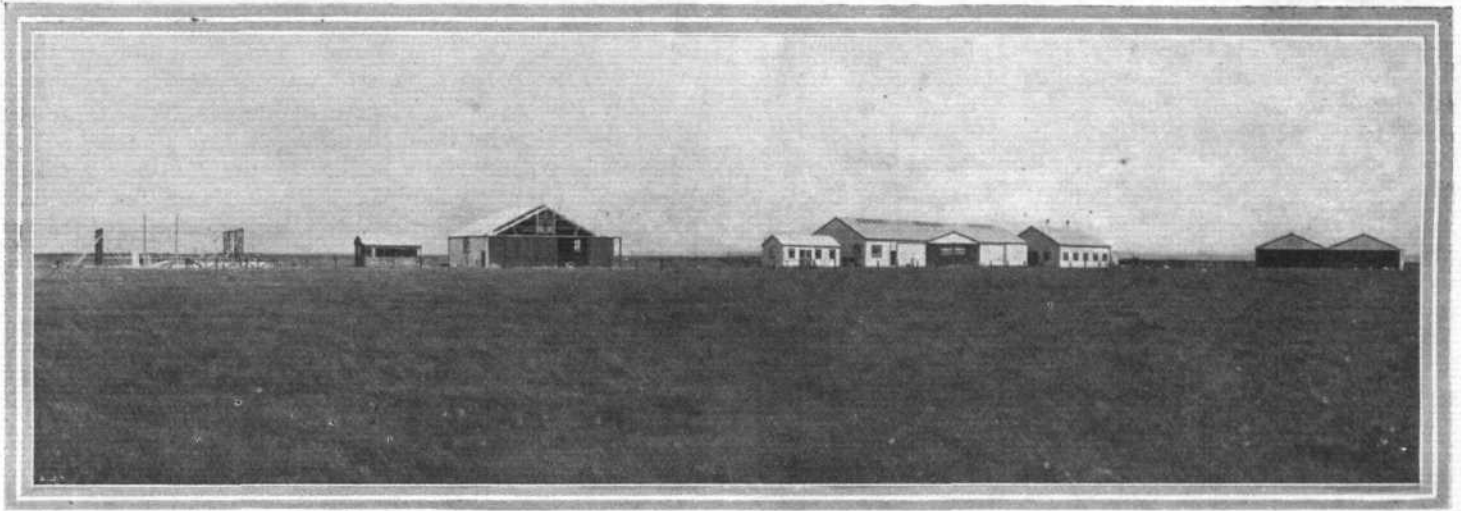
It will be seen that Voisin machines head the list with seven machines, while the Wrights are next with six machines. Although it will be noticed that each of the three pilots named have two machines, one of these will probably be piloted by M. Lefevre. The list contains the name of practically every aviator who has so far made his mark in connection with flight, while one or two are at present more or less unknown quantities.

Of the above, MM. Tissandier, Lambert, Gobron, Curtiss, Latham, Demanest, Ruchonnet, de Rue, Kluytmans, Farman and Cockburn have entered for all the events, MM. Esnault-Pelterie, Santos Dumont, and Delagrangé intend to compete in all but the Passenger event, and M. Sommer in all but the Height Contest.



Mr. G. B. Cockburn, the aviator who, as a member of the Aero Club of the U.K., will fly on behalf of Great Britain at the Rheims Flight Meeting next week.

SHELLBEACH STILL EXPANDING.



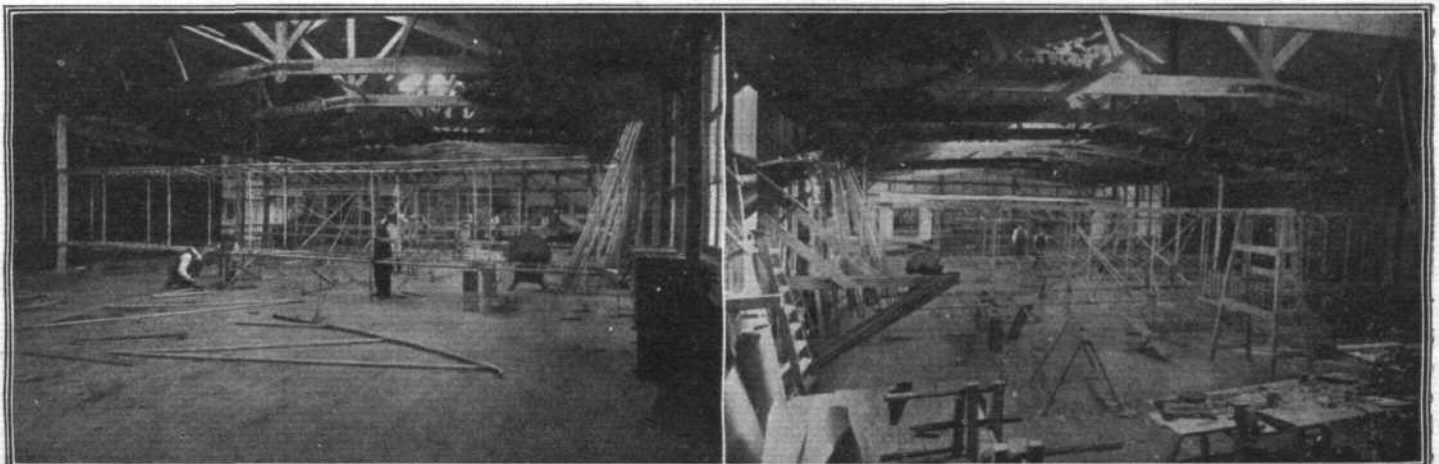
Panorama of the enclosure on the Aero Club's flight grounds at Shellbeach, showing Short Brothers' factory in the centre two of the Aero Club's sheds on the right, and a couple of private sheds on the left in course of erection, between which is a tiny little bungalow. Messrs. Harbrow have, in fact, been completing their buildings so quickly that, like mushrooms, they almost spring up in a night.

BECAUSE it happens that little has yet been done in the way of practical flight at Shellbeach up to the present time, some people have been led to a totally erroneous impression that there is a temporary "slump" in activities. Nothing, as a matter of fact, could well be wider of the mark than any such idea, and the accompanying photographs, one of which is a panorama of the Aero Club's enclosure, taken about three weeks ago, may, perhaps, serve to convey a conception of the realities to those who are unable to find time to get down and see for themselves. More particularly should this be the case if a comparison is made with a corresponding view which appeared only so recently as May 15th, for even at a cursory glance there has evidently been a very remarkable eight weeks' work. Further progress has since been made, the unfinished buildings having been completed and others commenced.

An even busier time is expected during the next few weeks, as Orville Wright is due in a few days to test the Wright flyers built there. He will also, it is reported, make some tests with his latest invention for automatically regulating the planes to suit varying winds.

Owing to the delay in getting the engines, however, Orville Wright may go to Germany before actually flying here. Tests have been carried out by Mr. Frank McClean on the biplane built for him by Messrs. Short Brothers, and another machine, of which something may be heard very shortly, is that designed by Lieut. Dunne, with which experiments were carried out in secret in Scotland. This is now at Shellbeach, and in a few days' time Mr. Gibbs hopes to have it in the air. Another aviator actively at work at Shellbeach is Mr. A. E. George, of Messrs. George and Jobling, Newcastle, who will be remembered as a driver of Argyll and Darracq cars in the Isle of Man races. He has quite recently purchased Mr. Moore-Brabazon's "Bird of Passage" (a description of which appears in this issue), and is familiarising himself with its working before actually attempting to fly. He, however, hopes to become proficient very quickly.

Messrs. Short Brothers have extended their sheds, as we said some time ago they intended to do, and still they have not room enough for their work in hand, although they are temporarily occupying two of the Aero Club's sheds,



Interior of Short Brothers' principal erecting shop, where the British-built Wright flyers are in course of construction. Although hardly established three months in their new premises, Messrs. Short are already employing 80 men. The above shop is 140 ft. long by 45 ft. wide.

which will be seen on the extreme right in the photograph. The building to the left of this is the new engineer's shop, which is quite a recent addition, and alongside is the main erecting shop, interior views of which we also publish. Here, among other machines, the half-dozen Wright flyers are being built, and as far as the framework is concerned, some of them are already complete.

Few people can have any conception of how really busy Short Brothers have been this last few months since they have established themselves on this unique flying ground, but the mere fact that they are employing about eighty men is at least proof of the fact that they

take their work seriously. It is moreover pleasing to note that there is throughout that same conscientious attention to high-class workmanship which we had occasion to commend when describing their first production at the Olympia Show. That machine, by the way, like the others, is still waiting for the engine, although its shed, also seen in our picture, is now practically ready for its reception.

It should not now be a far cry to the "jumping off" stage, and once reached it will be found, we think, that there will be forthcoming a sprinkling of men anxious to seek lasting reputation in the practice of flight.



AERO CLUB OF THE UNITED KINGDOM. OFFICIAL NOTICES TO MEMBERS.

Fixtures for 1909.

August 22-29 Rheims Aviation Week.
August 28 ... Gordon-Bennett Aviation Cup, Rheims.
October 3 ... Gordon-Bennett Balloon Race, Zurich.

Committee Meeting.

A meeting of the Committee was held on Tuesday, August 10th, 1909, when there were present: Mr. Roger W. Wallace, K.C., in the chair, Mr. Ernest C. Bucknall, Col. J. E. Capper, C.B., R.E., Mr. Martin Dale, Mr. John Dunville, Prof. A. K. Huntington, Mr. F. K. McClean, Hon. C. S. Rolls, Mr. Stanley Spooner, Harold E. Perrin, Secretary.

New Members.—The following new Members were elected:—

F. L. Bartlett.	Kenric B. Murray.
Spencer Cooper, R.N.	Harold Peters.
C. H. B. Fryer.	Frederick J. Reid.
A. E. George.	Eugene Sandow.
Lieut.-Col. N. B. Hefferman,	Maj. H. F. Stephens.
R.A.	E. C. Tufnell, R.N.

Rheims Aviation Week.

The Rheims Aviation Week commences Sunday, August 22nd, 1909, and races will take place during the whole of the week. A most interesting list of events has been arranged, including, in addition to the Gordon-Bennett Aviation Cup contest, competitions for attaining the greatest height, for carrying the greatest number of passengers, for speed, for distance, and for circuit of the track. With the exception of the Brothers Wright, all the world's best aviators have entered, as will be seen from the following list:—

Cockburn (England).	Curtiss (America).	Bleriot.
Sommer.	Santos Dumont.	Latham.
Tissandier.	Paulhan.	Delagrange.
Comte de Lambert.	Breguet.	Esnault-Pelterie.
Kluytmans.	Demanest.	De René.
Clemenceau.	Varilla.	Guffroy.
Gobron.	Robouet.	

Railway Arrangements.—The South-Eastern and Chatham Railway are prepared to issued First-Class Return tickets to members of the Aero Club at the reduced fare of £2 17s., provided parties of thirty travel together. The train leaves Victoria on Saturday morning, the 21st August, 1909, at 11 a.m. *Members are requested to make application at once for tickets to the Secretary of the Aero Club.*

Hotel Accommodation.—It has not been possible to make any hotel arrangements, owing to the very high

prices asked. A few rooms can be obtained at the Grand Hotel, Rheims, ranging from 50 francs per day, for which application must be made at once *direct to the Hotel.*

A list of hotels and apartment houses appeared in the "Official Notices" of last week.

Club House at Shellbeach Flying Ground.

The Committee of the Aero Club are proposing to take over Muscle Manor for a Club House on the flying ground. In order that this may be effected, and in view of the very large expenditure which has already been made at Shellbeach, the Committee appeal to the Members for special subscriptions for this purpose. The Golf Course will be taken over for the use of Members, together with the shooting rights extending over 1,000 acres.

The following sums have already been promised:—

Frederic Coleman, £10; Frank McClean, £10;
H. Massac Buist, £2 2s.

Erection of Sheds.—Members wishing to erect sheds at Shellbeach are requested to apply to the Secretary, who will supply all information.

Members visiting the flying ground are requested to have with them their membership cards, as strict instructions have been given to admit only Members to the flying ground.

Railway Arrangements.—The following reduced fares have been arranged with the railway company for members visiting Shellbeach:—

1st Class return, 8s.; 2nd Class return, 6s. 6d.; 3rd Class return, 5s.

Tickets are available for one month from date of issue.

Members desiring to avail themselves of these reduced fares are required to produce vouchers at the booking offices. Vouchers can be obtained from the Secretary of the Aero Club. Trains leave Victoria, Holborn, or St. Paul's.

For the convenience of members, the best train is the 9.45 a.m. from Victoria, arriving at Queenborough 10.55. At Queenborough change to the Sheppey Light Railway for Leysdown (Shellbeach), which is $\frac{3}{4}$ -mile from the flying ground.

HAROLD E. PERRIN, Secretary.

The Aero Club of the United Kingdom,
166, Piccadilly, W.

M. ROGER SOMMER'S RECORD.

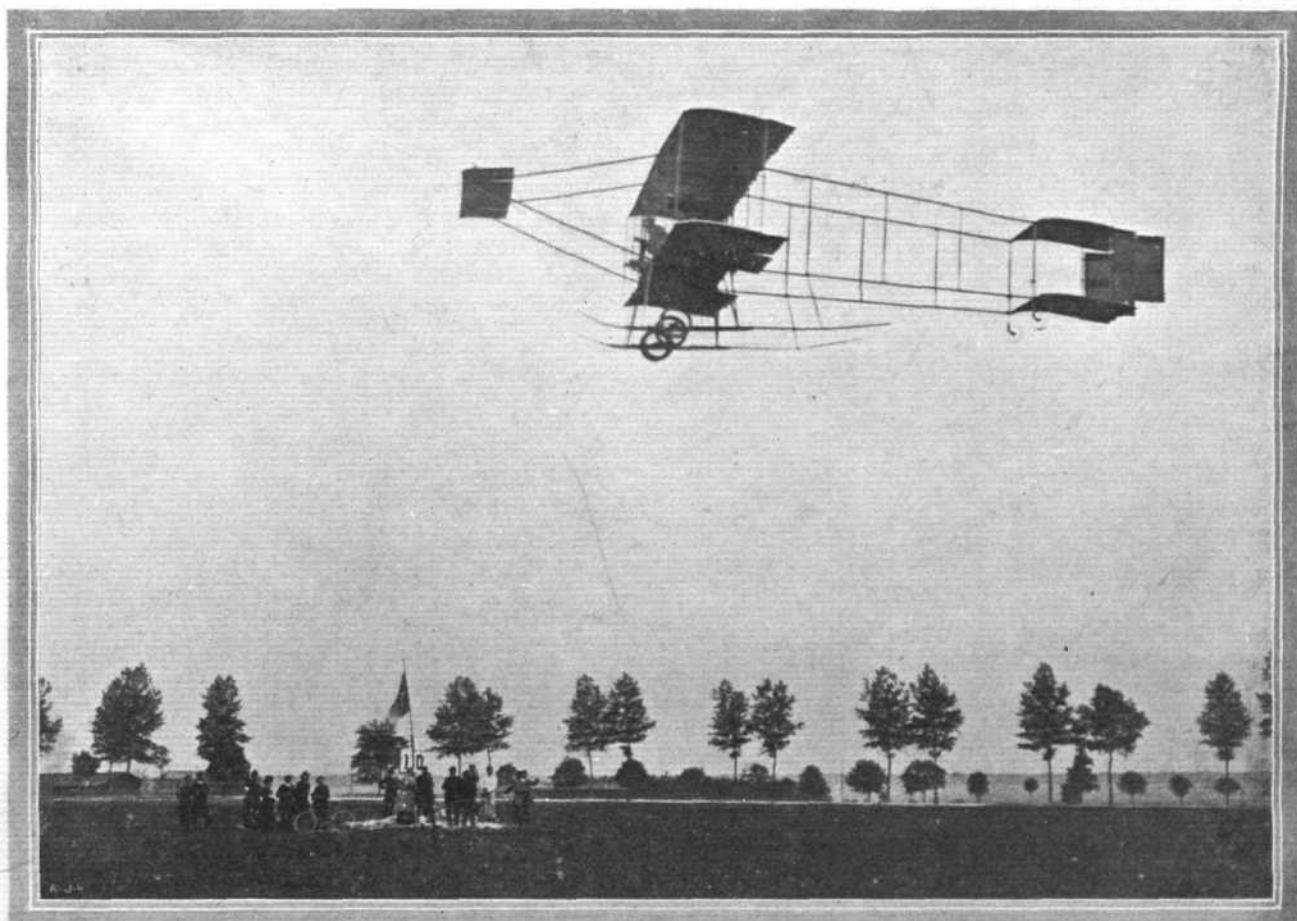
CONTINUING to better his performances every time, M. Sommer, who only a few weeks ago was unknown as an aviator, succeeded in placing himself at the head of the list of successful flyers on Saturday last. Starting at a quarter past three in the morning, he continued flying until he had been aloft for 2h. 27m. 15s., thus easily beating Wilbur Wright's record of 2h. 20m. 23s. Unfortunately, this fine effort of Sommer was not officially timed, and so it will not rank as a world's record, but that does not detract from the merit of the performance.

When one considers that it was only a little over a month ago, on July 4th, to be exact, that M. Sommer took possession of his machine, it speaks volumes for the great advances which have been made during the past few months. Last December the magnificent flight of Wilbur Wright placed the American type of biplane in the forefront. This position it has held for some time, although the French monoplanes have repeatedly threatened their supremacy, and Bleriot's cross-Channel flight may be said to have given them the place. Now, however, the French biplane school are in front.

As we have stated above, M. Sommer for his long flight made an early start, just as dawn was breaking, in fact, and so there were not many people present at the commencement. For the first half-hour everything seemed to go well, but after then it was noticed that the speed had slackened. It was noticed that part of the fabric of the lower plane had come adrift, apparently owing to the damp, and was flapping in the wind.

M. Sommer momentarily thought he would have to descend, in order to rectify this. The propeller, however, solved the difficulty, as, catching the loose fabric, it tore it away. Thus relieved, the aeroplane regained its former speed, and flew on and on in wide circles over Chalons Camp. After M. Sommer had been aloft an hour the news quickly spread, and so the crowd of onlookers quickly grew. At the end of the second hour the anxiety was intense, as it was realised that M. Sommer had every chance of beating Wright's record, and so placing the duration record to the credit of France. The minutes slowly crept by, and the aeroplane kept circling steadily on until the record time had been passed. At this point the enthusiasm of the assembled spectators was boundless, but just to make certain of the time M. Sommer continued and made one more circle over the Camp. Then his petrol tank being almost dry, he thought it wise to come down, when he was surrounded by the crowd and carried in triumph to his shed, where his health was vociferously drunk in champagne.

The next day M. Sommer intended to repeat this flight in the presence of Aero Club officials. He started off about 7 o'clock in the evening, but, such is the luck of flying, engine troubles began to make themselves apparent. After the aeroplane had been in the air for a few minutes, the motor suddenly stopped, and the flyer dropped suddenly to the ground from a height of about 25 feet, sustaining a good deal of damage.



M. Sommer's record (unofficial) flight on a Farman biplane of 2h. 27m. 15s. at Chalons last Saturday.—M. Sommer is just flying over the timekeeper's pitch on his tenth circuit, the figures below the flag denoting this alike to the aviator and the attendant public.

On the Wednesday previous M. Sommer came very near beating Wright's record, and only failed because his petrol supply gave out. Unlike his successful effort last Saturday, this flight was made in the evening. Commencing at 7.34 p.m. he flew in wide circles over Chalons Camp at a speed of about 40 miles an hour, and darkness coming on, torches and motor car lamps were placed around the ground to guide him in his flight, which lasted for 2 hrs. 10 mins.

M. Sommer's Progress.

IN view of this latest feat of M. Sommer, our readers may be interested in the following diary of his progress as an aviator:—

July 4th.—Took delivery of his Farman aeroplane and flew for 6 kiloms. at 10 metres altitude.

July 5th.—Flew for half-an-hour.

July 14th.—Flew from Chalons to Savenay and back.

July 17th.—Flew for half-an-hour at a height of 30 metres.

July 18th.—Flew for 1h. 4m. and had to stop owing to darkness.

July 28th.—Flew for 1h. 23½m.

August 1st.—Flew for 1h. 50m., officially beating French record.

August 2nd.—Flew from Buoy to Suippes and back.

August 4th.—Flew for 2h. 10m.

August 7th.—Flew for 2h. 27m. 15s.

Sommer Gets a Medal.

As a memento of his cross-country trip from Buoy to Suippes, M. Sommer was on Monday presented with a gold medal by the Mayor of Suippes, in the presence of a large crowd, who enthusiastically cheered the successful aviator. On returning to Chalons he made several short flights, and at the end of one, when endeavouring to glide to earth, he apparently came down too sharply, slightly damaging the chassis of his machine.

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AVIATION NOTES OF THE WEEK.

At Chalons.

ON the 3rd inst., Henry Farman made a long flight, remaining in the air for 48 mins., and then only descending because he found the atmosphere too chilly. Mr. Cockburn also twice circled round the circuit. On the 6th inst., Mr. Cockburn made several flights, although there was a fair breeze blowing at the time, and again on Monday last several flights of 10 mins. or so, while on Tuesday he progressed still further, his best effort lasting for about 20 mins.

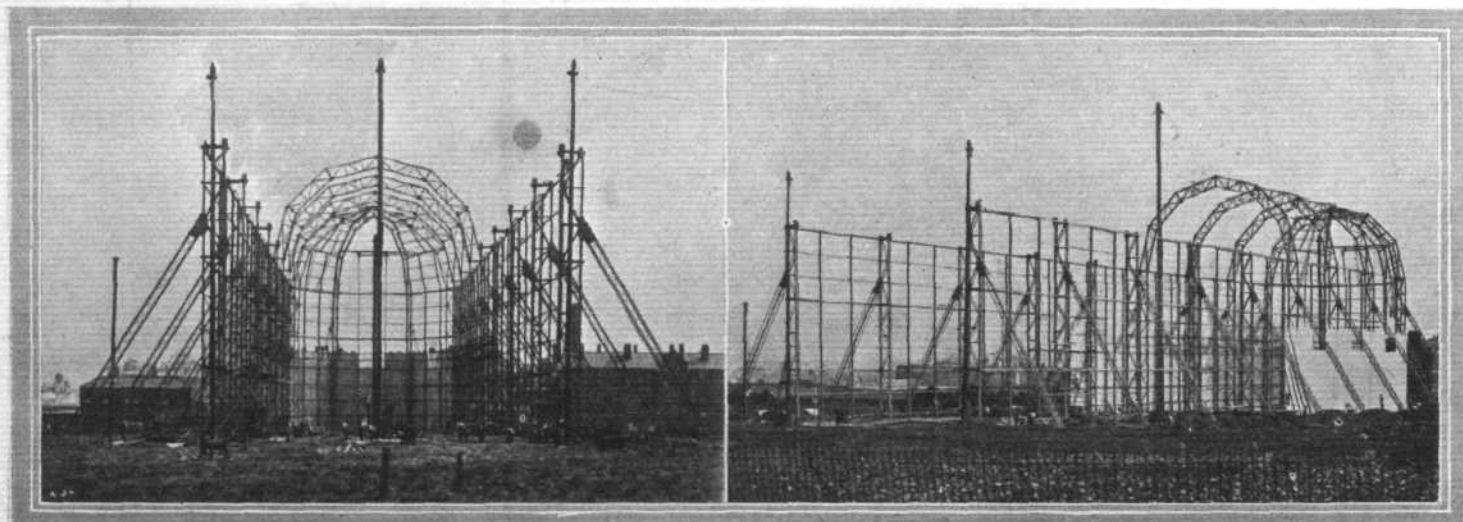
M. Jean Gobron has also been flying again on his Voisin biplane. On the 3rd inst., he made a flight lasting 14 mins. On the 6th inst., he flew twice, once for 15 mins. and the second time for 36 mins., and on the following day he was aloft for about half-an-hour.

Bleriot Teaching Leblanc and Delagrangé.

M. LEBLANC, having purchased the first of the duplicates of the "Bleriot XI," has been receiving lessons from M. Bleriot at Issy. On the 4th, after M. Bleriot had tried the machine, M. Leblanc took his seat, and after one or two runs along the ground to familiarise himself with the various levers, he succeeded in flying for 150 metres.

On the next afternoon, M. Bleriot arranged to give M. Leblanc a lesson, but in view of the squally wind which was blowing, it was hardly possible to give actual instruction, and although M. Bleriot made a short flight himself, he would not allow M. Leblanc to make an attempt. On Friday week, however, the weather was a little more propitious, and M. Bleriot tested the machine to his satisfaction, making one flight of a kilometre and a second of 6 kilometres. Leblanc then took his seat and flew for 600 metres; he then slowed down and turned with the wheels on the ground, and flew for 700 metres. In landing he came down rather suddenly in an awkward corner of the ground, with the result that the tractor screw and chassis of the machine were slightly damaged. Repairs were completed on Monday, when Leblanc made several good flights, the longest being one in which the Issy parade ground was encircled three times.

Delagrangé has secured the second of the cross-Channel Bleriot flyers, and on Monday he was to have had his first lesson. Carburettor troubles, however, delayed this until the following day, when satisfactory progress was made.



PROGRESS ON THE "DAILY MAIL" DIRIGIBLE BALLOON GARAGE ON WORMWOOD SCRUBBS.—Two views of the erection as it stood on Monday last, by which it will be realised no time is being lost in completing the aerodock which is to house the Clément-Bayard airship when it arrives next month under the auspices of the Parliamentary Aerial Defence Committee. The spherical seen in the left-hand photograph is Gaudron's captive balloon floating over the White City.

Anzani as an Aviator.

M. ANZANI, who has found himself famous as the maker of the engine used by M. Bleriot on his cross-Channel trip, has taken up aviation in earnest, and on Saturday last was at Chalons Camp familiarising himself with his Voisin biplane. He has entered his name as a competitor at the Brescia meeting. On Monday he carried out several flights of a kilometre in length.

Jerme Biplane at Issy.

ON the 4th inst. M. Jerme made his first trial with his biplane at Issy. In general design it follows very much the same lines as the Wright flyer, having a biplane elevator in front and rudders at the rear. The main planes are 12 metres from tip to tip, and the machine weighs about 400 kilogs. It is fitted with a three-cylinder 50-h.p. Anzani motor, which drives a four-bladed propeller.

Blanc Monoplane.

DURING the past fortnight M. Blanc has been experimenting at Marseilles with his new monoplane, but up to the present the best results obtained have been a number of hops of about 20 to 30 metres in length. The machine has a total lifting surface of 30 sq. metres, the motor is a 7-cyl. R.E.P. of 35-h.p., and the propeller is of 2 metres diameter.

M. Sivet at Juvisy.

WHILE trying a Voisin biplane at Juvisy on Saturday last, M. Sivet, one of the latest aspirants for flight, had a tumble. He was flying at a height of about ten metres when he apparently pulled the wrong lever, and made an unintentionally rapid descent to earth. Fortunately, he escaped without injury, but the aeroplane and the motor were both somewhat damaged.

Baron de Caters at Issy.

ON the 5th inst. Baron de Caters was in the air at Issy soon after 4 o'clock on his Voisin machine, and made a flight which lasted for 17 mins., during which he made wide sweeping circles over the military camp.

M. Bunau-Varilla Flies for Fifteen Minutes.

ANOTHER promising aviator is M. Bunau-Varilla, who has been experimenting at Issy with a Voisin machine fitted with an E.N.V. motor. On the 5th inst. he brought out his machine, which had been rapidly

"assembled" in five days, and at his first attempt flew round the camp six times at a height of about 15 metres, the time occupied being 15 mins. 20 secs. M. Varilla has entered for some of the events at Rheims.

The Juvisy Fortnight.

THE Société d'Encouragement d'Aviation announce that their special fortnight will be held from October 3rd to the 17th.

A Spanish Biplane at Issy.

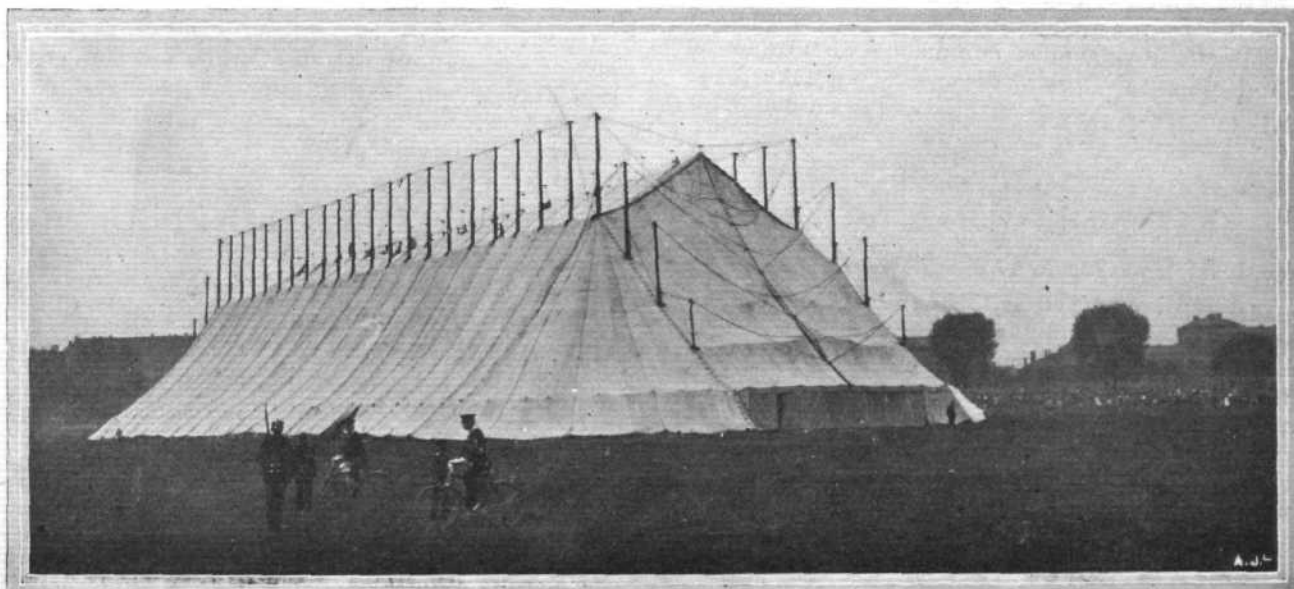
ON the 5th inst., the biplane designed by Lieut. Sanchis for the Spanish Minister of War, and which has been built in Paris, was brought out for trial at Issy by Delagrange. In design it follows very much on the lines of the Wright machine, but is much smaller and lighter. It is, however, fitted with a cellular rudder and the motor is of Anzani make. No attempt at flight was made, Delagrange contenting himself with running the machine along the ground.

Lieut. Calderara at Work Again.

THE reports that Lieut. Calderara had been ordered by his medical advisers to give up his active pursuit of aerial navigation seem to have very little foundation in fact, for on Sunday last he was flying at Centocelle with Lieut. Savoia. The Wright flyer has been slightly modified, and a more powerful motor fitted, with which it is hoped to attain a speed of 70 kiloms. an hour. A first flight of eight minutes was made, and then two others of longer duration, one lasting for 37 mins. 20 secs., during which over one hundred turnings were made. It is reported that Lieut. Calderara intends to fly from Centocelle to Rome and back shortly, and it is possible that he, with Lieut. Savoia, may take part in the Brescia meeting. On Wednesday last, carrying Lieut. Savoia as a passenger, he flew for 40 minutes.

Aviation in Holland.

AFTER a week of continual rain and weary waiting for disheartened aviator and spectators alike, the clouds cleared away last Wednesday week, and in ideal summer weather M. Lefevre, as we mentioned in our last issue, after a short flight before the Prince Consort, made a fine flight of 18 mins. before a large concourse of people. It was curious to see the fright of the cattle as the unknown monster sailed over their heads; they rushed madly in every direction.



LATEST FORM OF PORTABLE AIRSHIP "SHED" FOR MILITARY PURPOSES.—This dock is for the German airship "Gross II," and is seen from the entrance end.

M. Lefevre soared over the highest trees, and had his machine in perfect control all the time he was in the air. He came down within a few yards of the shed, and he and the aeroplane were immediately surrounded by an admiring and enthusiastic crowd.

On Thursday, as a last performance before leaving for Rheims, he was again in the air for 25 mins., flying at a speed of about 50 k.p.h.

M. Lefevre's success is one more testimony to the rapidity and ease with which flight can be achieved by novices, as he only learned to fly after the arrival of the Wright machine at The Hague. His first actual flight was barely a week previous to the performances recorded above, when he came down in a dyke with what, it is hardly surprising to hear, a correspondent describes as a sort of "dout-know-where-he-are" expression. Prior to his departure for Rheims he was accorded a dinner of honour by the Aero Club of Holland at Scheveningen.

Flying in Sweden.

ON the 6th inst., MM. Hansen and Legagneux, at Stockholm, made altogether eight flights, including two of five kiloms., on their Voisin machine. During one flight of about a kilometre in length, Legagneux carried Erik Pallin as a passenger.

A Curtiss Pupil Flies.

ON Monday Mr. Willard, one of the pupils selected by the Aeronautic Society to be taught the art of manipulating the Curtiss flyer purchased by them, succeeded in making several flights, one of the best being about two miles in length. The trials are being carried out at Mineola, Long Island, U.S.A.

An Italian Prize.

WITH the view of stimulating aviation in Italy, the *Corriere della Sera*, of Milan, has offered a prize of £200, which will be awarded to the Italian aviator who, on an Italian machine, makes the best performance up to September 2nd. The distance flown must be at least 20 kiloms., the distance of the Gordon-Bennett race.

Impromptu Model Flying Contest.

COMMENCING last night (Friday) the Secretary of the Aeroplane Club notifies us the club is holding every Friday, at Wembley Park, a meeting to which members are invited to bring their models and engage in impromptu flying contests. Proceedings commence each week at 5 p.m., and after, an informal discussion will take place in the Club rooms. Arrangements have been made for storing members' models.

AIRSHIP NEWS.

"Parseval III" Makes a False Start.

LAST Saturday morning "Parseval III" made its first ascent at the Frankfort Exhibition, but a mishap with the machinery caused an immediate return to its moorings. In the afternoon, however, a successful trial was carried out, and on Sunday the airship was to have made the first of the series of aerial excursions. Apparently, however, the fare of £10 asked for a trip of two hours has not proved very popular, for there does not appear to have been a great rush to book seats.

"Zeppelin II" Reaches Cologne.

ON Thursday, 5th inst. "Zeppelin II" was successfully piloted from Frankfort to Cologne, a slight detour

being made to Düren so as to manœuvre over that town in order to please a wealthy resident who had promised to contribute £5,000 to the Zeppelin Fund if the airship would visit Düren on its way to Cologne. A start was made from Frankfort at 4.30 a.m., and the destination was reached just before 11 a.m.

A Sixteen Hour Flight by "Gross II."

LAST week the German Army airship "Gross II" put up a fine performance by making a voyage lasting for over sixteen hours. Leaving the Tegel Parade Ground at 11.20 p.m. on August 4th, the dirigible sailed over Halle-on-Saale and Weissenfels to a point about 95 miles from Berlin, and returning over the same route landed at Tegel again about 4 o'clock on the afternoon of August 5th. Halle-on-Saale was passed at 2.30 a.m. on the outward journey and Weissenfels an hour later, while on the homeward journey Weissenfels was passed at 7.30 a.m.

"Republique" Flies Over Paris.

ON Sunday last Parisians had a splendid opportunity of seeing the latest French dirigible, "Republique," in its element, when Capt. Bois manœuvred his vessel over the French capital for about an hour and a half. Leaving the shed at Chalais Meudon at 7.30 a.m., the airship was over the city half an hour later, and cruised about in various directions as far as the Place de la Bastille, returning to its shed at 10 a.m.

NOTICE.—In consequence of the great pressure on our space it has been necessary to hold over Correspondence, Inventors' Ideas, &c.—ED.

Aeronautical Patents Published.

Applied for in 1908.

Published August 12th, 1909.

20,822. E. SCHMID AND H. BAUER. Motor vehicle adapted for use as flying machine, motor boat and sledge.

Applied for in 1909.

Published August 12th, 1909.

205. G. A. METCALF. Aeronautic apparatus.
6,305. H. SPRANGER. Toy aeronautical apparatus.
9,609. J. MEANS. Apparatus for launching flying machines.
11,934. Dr. J. SCHILLING. Balloons, airships.

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